(19) World Intellectual Property Organization International Bureau

NIPO OMPI

(43) International Publication Date 9 February 2006 (09.02.2006)

(10) International Publication Number WO 2006/013870 A1

(51) International Patent Classification⁷: F02D 19/08, 41/00, 41/04

(21) International Application Number:

PCT/JP2005/014158

(22) International Filing Date: 27 July 2005 (27.07.2005)

(25) Filing Language:

(26) Publication Language:

English English

(30) Priority Data:

2004-227811

4 August 2004 (04.08.2004) JP

- (71) Applicant (for all designated States except US): TOY-OTA JIDOSHA KABUSHIKI KAISHA [JP/JP]; 1, Toy-ota-cho, Toyota-shi, Aichi 471-8571 (JP).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ITO, Yasushi [JP/JP]; с/о ТОУОТА ЛООЅНА КАВИЅНІКІ КАІЅНА, 1, Тоуota-cho, Toyota-shi, Aichi 471-8571 (JP).
- (74) Agents: TAKAHASHI, Hideki et al.; TAKADA, TAKA-HASHI & PARTNERS, 5th Floor, Intec 88 Bldg., 20, Araki-cho, Shinjuku-ku, Tokyo 160-0007 (JP).

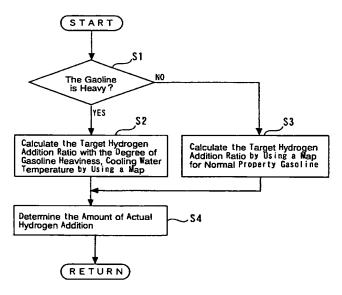
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTROL SYSTEM FOR HYDROGEN ADDITION INTERNAL COMBUSTION ENGINE



(57) Abstract: Disclosed is a control system for a hydrogen addition internal combustion engine that uses hydrocarbon fuel and hydrogen gas as combustion fuel. The control system includes fuel property judgment means for judging the property of hydrocarbon fuel; and addition ratio increase means that, when the hydrocarbon fuel is found to be heavy, increases the ratio of hydrogen gas addition to the hydrocarbon fuel. When the hydrocarbon fuel is found to be heavy, the control system increases the ratio of hydrogen gas addition to the hydrocarbon fuel. It is therefore possible to inhibit the combustion state from deteriorating due to the use of heavy fuel, thereby offering good emission and driveability.



